Denver International Airport Benchmarks

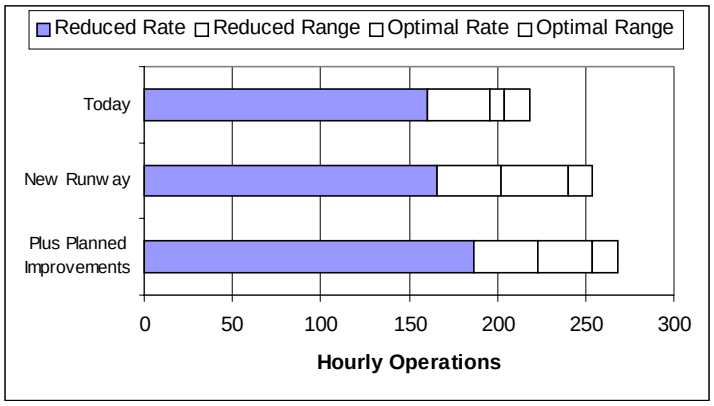
- The current capacity benchmark at Denver is 204-218 flights per hour in good weather.
- Current capacity falls to 160-196 flights (or fewer) per hour in adverse weather conditions, which may include poor visibility, unfavorable winds, or heavy precipitation.
- Denver has sufficient capacity to handle demand in both good and adverse weather without significant delays.
- During adverse weather conditions, there are periods when departure demand exceeds capacity and departures may encounter brief delays. Today less than 0.25% of aircraft are delayed significantly (greater than 15 minutes).
- A new runway, scheduled to open in 2003, is expected to improve Denver's capacity benchmark by 18% (240-254 flights per hour) in good weather and by 4% (166-202 flights per hour) in adverse weather. This assumes that airspace, ground infrastructure, and environmental constraints allow full use of the runway.
- In addition, technology and procedural improvements, when combined with the new runway are expected to increase Denver's capacity benchmark by a total 25% (to 254-268 flights per hour) in good weather over the next 10 years. The adverse weather capacity benchmark will increase by a total of 17% (to 187-223 flights per hour) compared to today.
- These capacity increases could be brought about as a result of:
  - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV routes, which allow a more consistent flow of aircraft to the runway.
  - pFAST, which assists the controller with sequencing aircraft, for a better flow of traffic into the terminal area.
- Demand at Denver is expected to grow 23% over the next decade suggesting that delays will not become a problem at Denver once the planned improvements are implemented.

DEN – Denver International Airport

Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

Scenario	Optimum Rate	Reduced Rate
Today	**204-218**	**160-196**
New Runway	**240-254**	**166-202**
Plus planned improvements	**254-268**	**187-223**



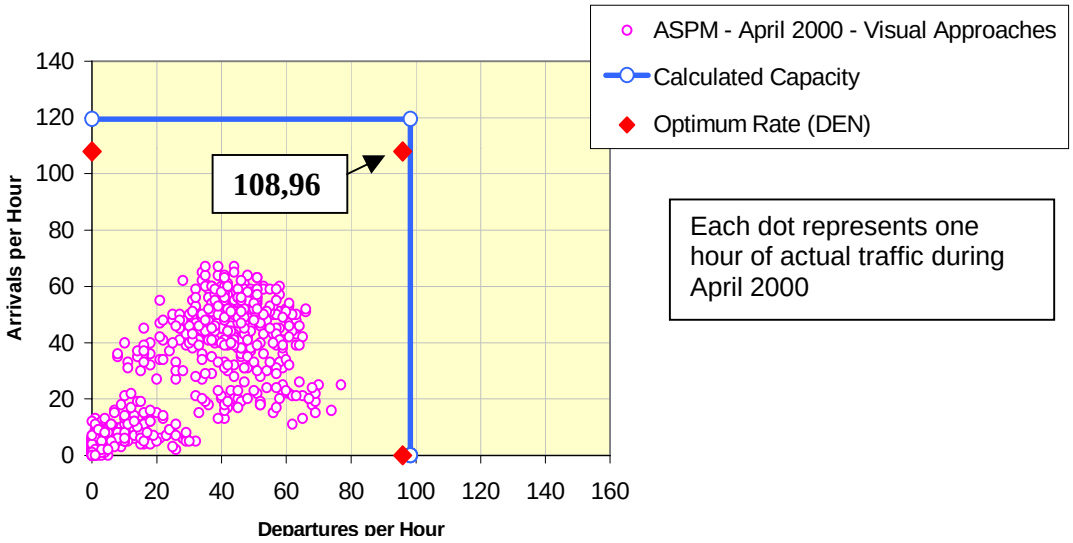
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
  - pFAST, which assists the controller with sequencing aircraft, for a better flow of traffic into the terminal area
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
  - Taxiway and gate congestion, runway crossings, slot controls, construction activity
  - Terminal airspace, especially limited departure headings
  - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

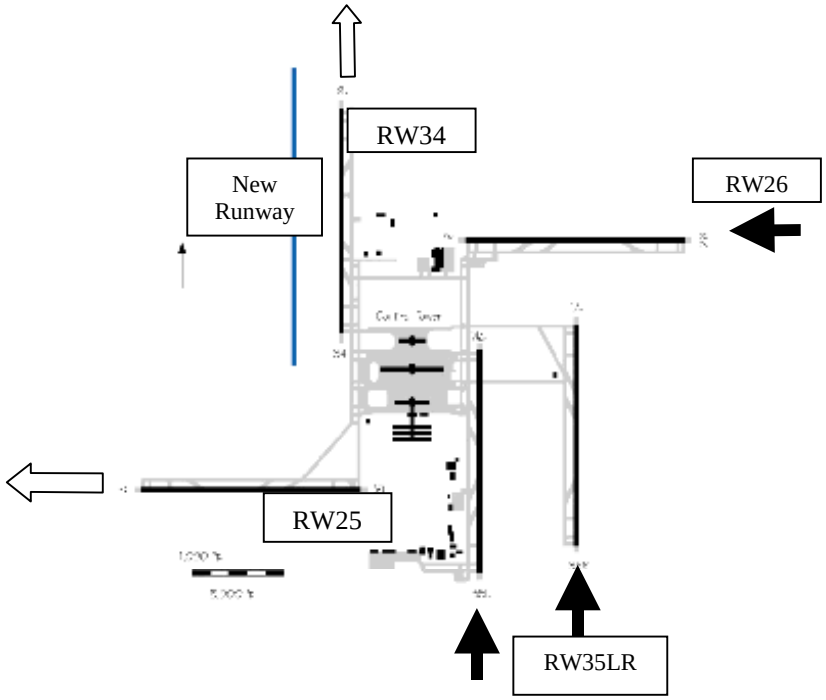
These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

Current Operations – Optimum Rate

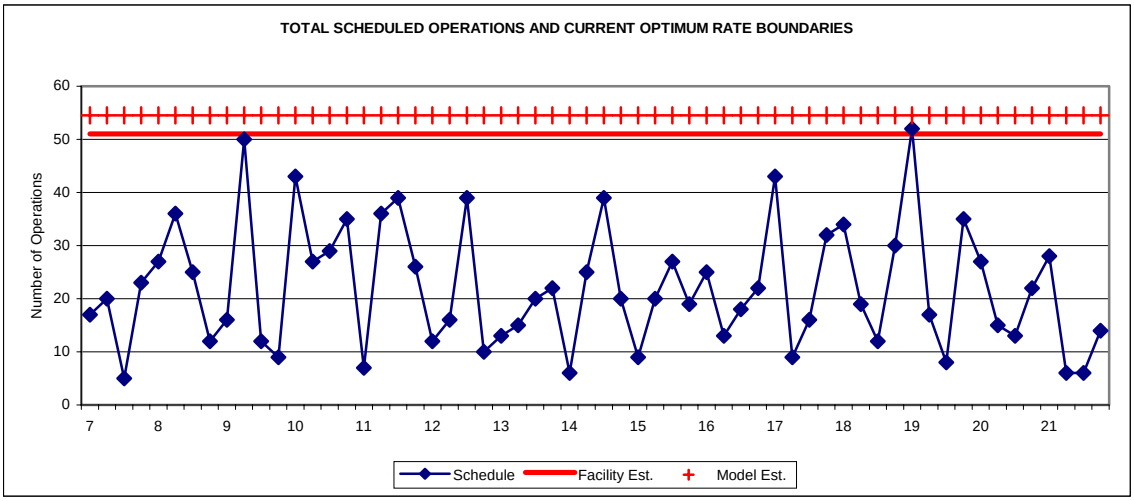
- Visual approaches, visual separation
  - Optimum rate of (108,96) was reported by the facility.
  - Configuration shown is configuration reported by facility.
  - Other configurations or adverse winds can reduce these optimal rates.
- ASPM data is actual hourly traffic counts
- Chart below represents observed hourly traffic and expected rates in terms of operations per hour. Solid line represents the expected limit of hourly operations.

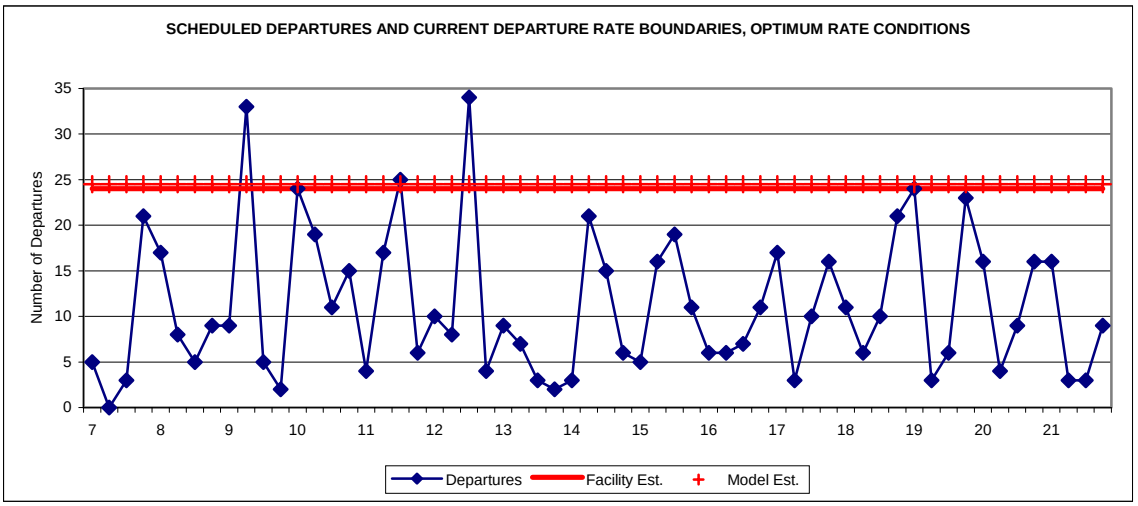


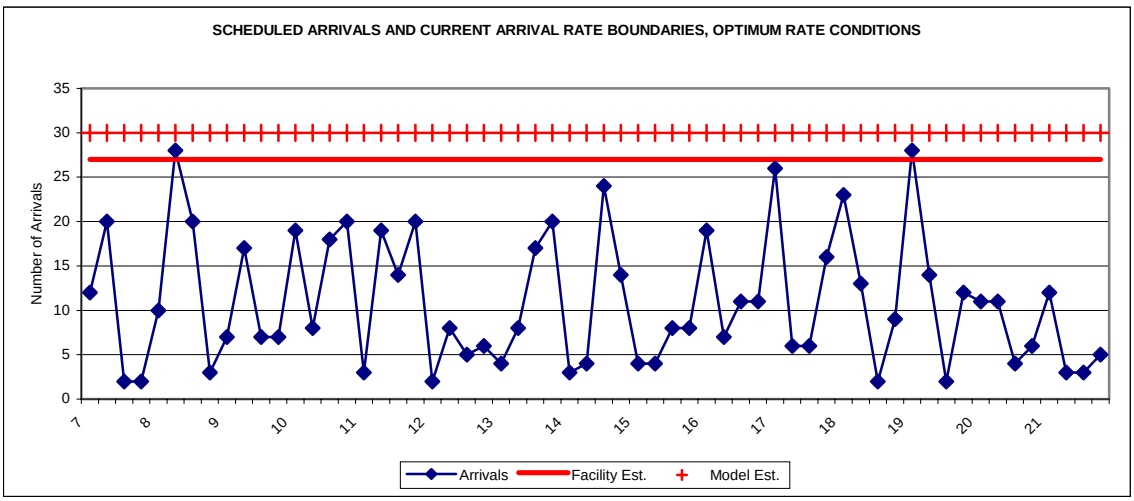


DEN – Denver International Airport

Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions

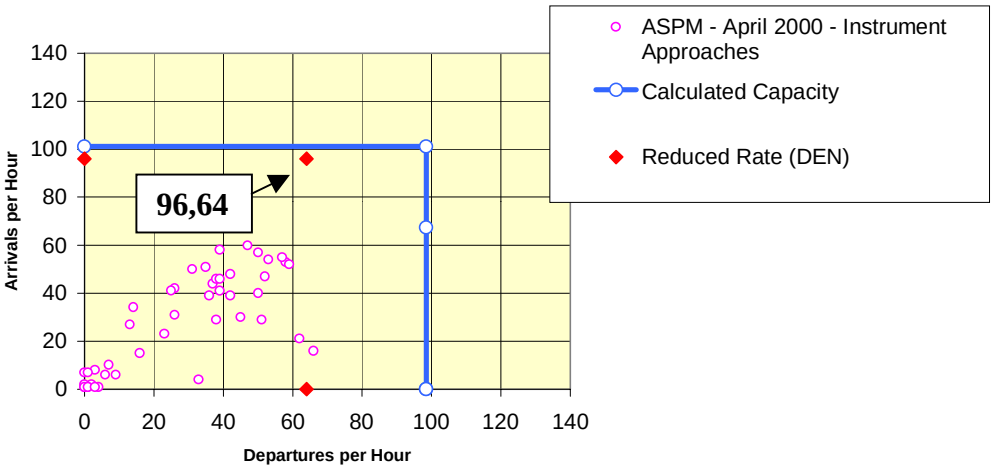


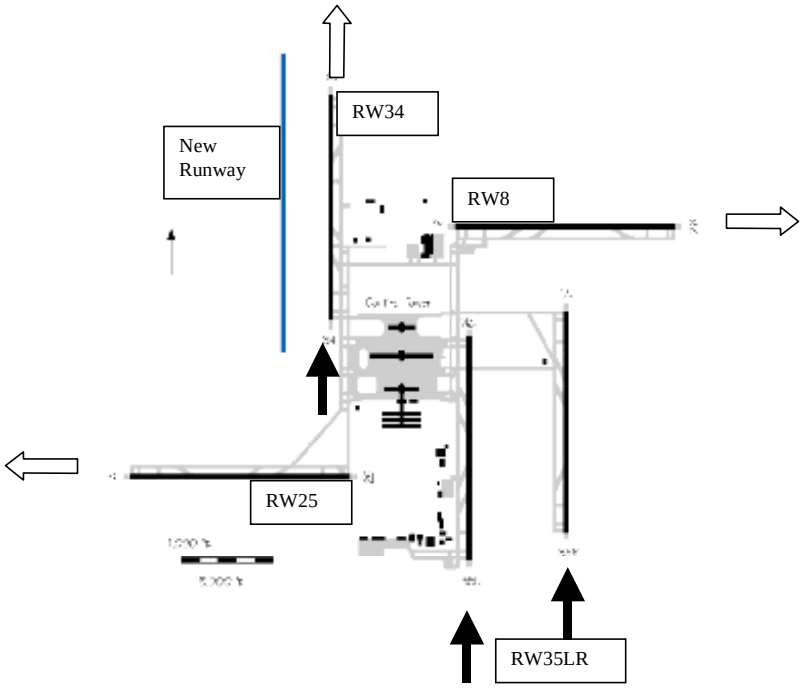




Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
  - Reduced rate of (96,64) was reported by the facility.
  - Configuration shown is configuration reported by facility.
  - Other configurations or adverse winds can reduce these optimal rates.
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates
- Chart below represents observed hourly traffic and expected rates in terms of operations per hour. Reduced arrivals on RW34 will lower the arrival capacity.





Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions